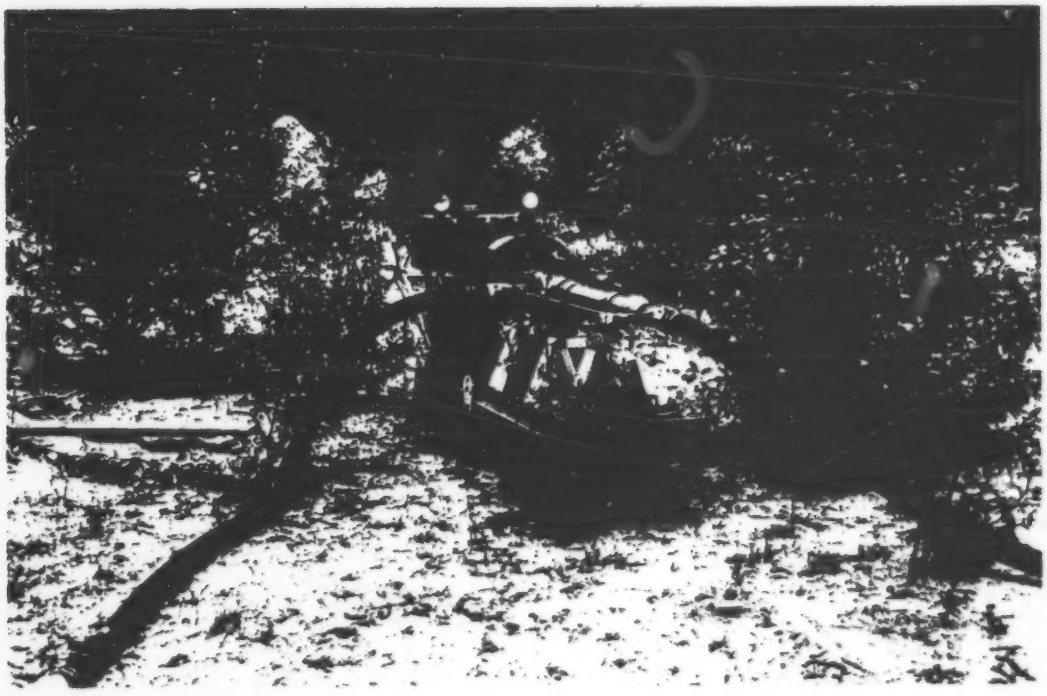
MONO PUMP

EQUIPMENT EVALUATION REPORT



CANADIAN PETROLEUM ASSOCIATION

EXECUTIVE SUMMARY

A Long Distance Pump has been designed, developed and tested to determine its ability to pump products from a spill site to a recovery site.

CONCLUSION

The Canadian Petroleum Association (C.P.A.) mono pump demonstrated that it has the ability to pump long distance with a wide variety of products in a safe, efficient, cost effective manner.

RECOMMENDATAION

The Mono Pump should undergo further evaluation throughout the various areas of operations and related environmental protection cooperatives to further evaluate its ability to efficiently pump hydrocarbon products.

INTRODUCTION

The recovery of hydrocarbon spills in remote sites where the access is difficult to access and costly to build access into.

In most cases recovery of the spilled fluids can not be attempted until access has been built into the spill site.

Access into a spill site takes time, destroys the environment (which is costly to put back into the same condition as before). During this time period the spilled material has the potential to migrate over larger areas which results in increased recovery and reclamation costs.

In an effort to increase spill response time, improve oil/water recovery efficiencey and reduce clean-up and reclamation costs the Canadian Petroleum Association has assisted with the design, development and testing of a mobile long distance pump which has the capability to safely recover highly volatile flammable substances such as condensate, gasoline, to heavy gravity crude oil products in remote hard to get to areas.

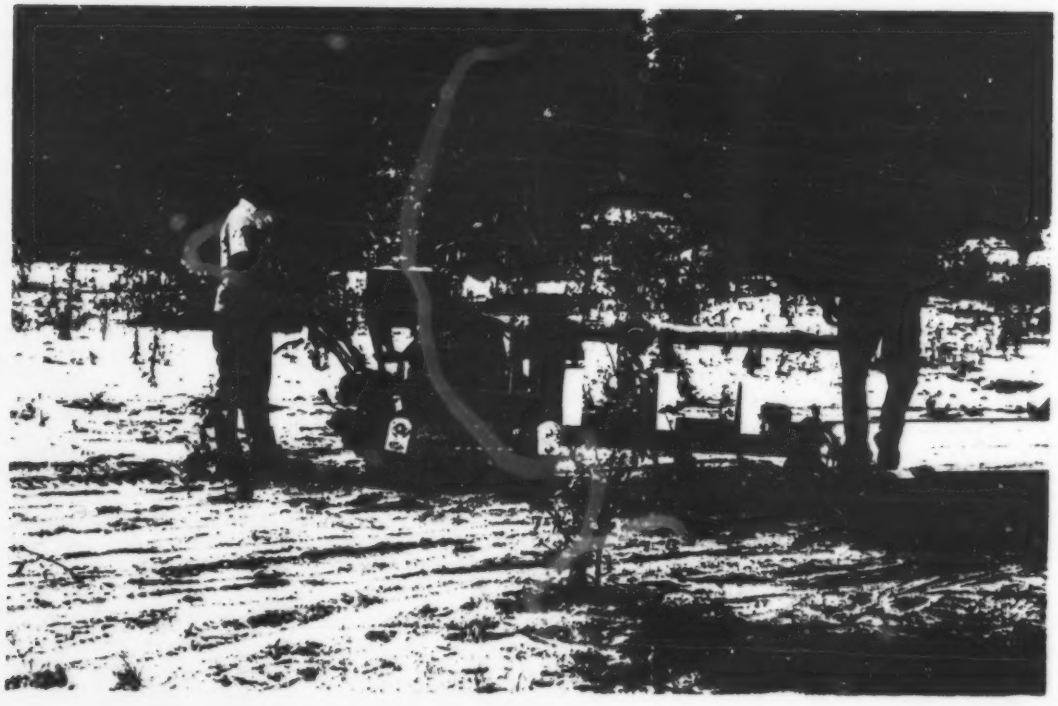
MONO PUMP
PRINCIPLE OF OPERATION

The Mono Pump is mounted on an engine powered track carrier and/or can be detached from the carrier and be skided into the remote spill sites.

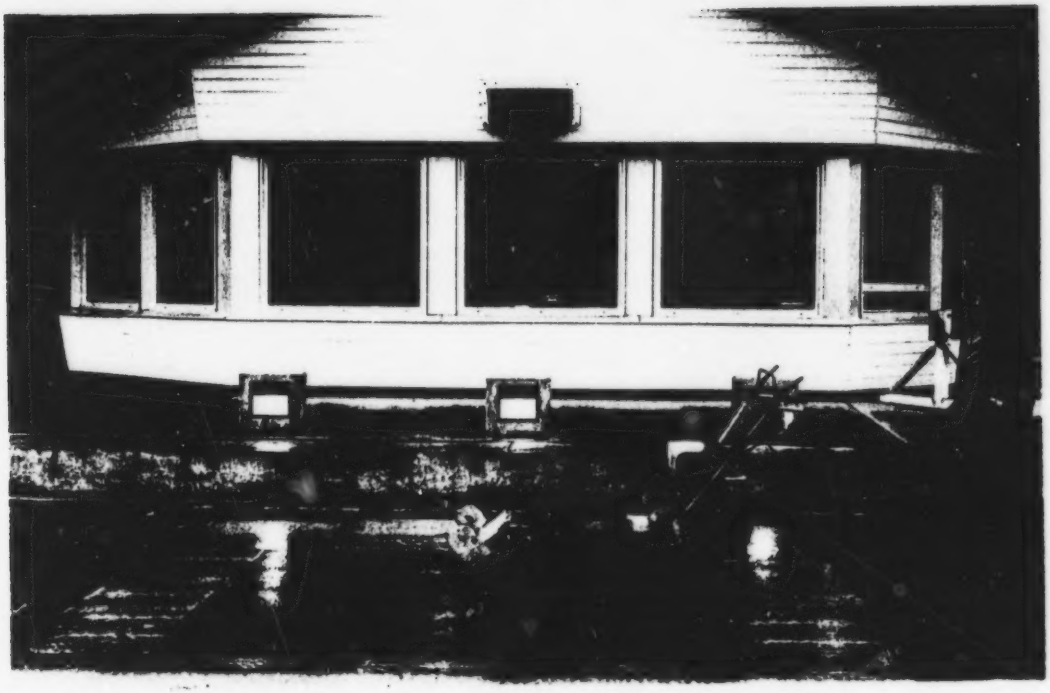
The Mono Pump consists of an engine powered track carrier, an aluminum skid plate type of toboggan, and a 17.5 horse power diesel engine (comes with air shut off valve and spark aresstor) which drives a 3 stage safe priming screw pump. Mounted on the pump are two headlights for night operation and an electric winch on the front of the tobaggan to assist in the transporting abilities. The mono pump is helicopter transportable by a "Bell 206 B" helicopter.

The Mono Pump can pump up to 30 gpm at 0 head with product of 5000 centipoise can be pumped up to 1000 feet in a vertical direction. It will pick up and pump 0.30 type of debree. The pump has a built in relief valve which is set at 100 psi. This is to protect the 3" rigid suction hose and "O" rings. ("O" rings are good for 120 psi and the hose is good for 160 psi)

17.5 litre diesel engine comes with spark arrester and air shut off valve.



Mono pump can be transported by the track carrier or towed on its own by its own tobaggan type skid or by a cat backhoe etc.



Mono pump is removable from track carrier. It can be used for other jobs.

Track carrier can also be used for transporting equipment from area to area

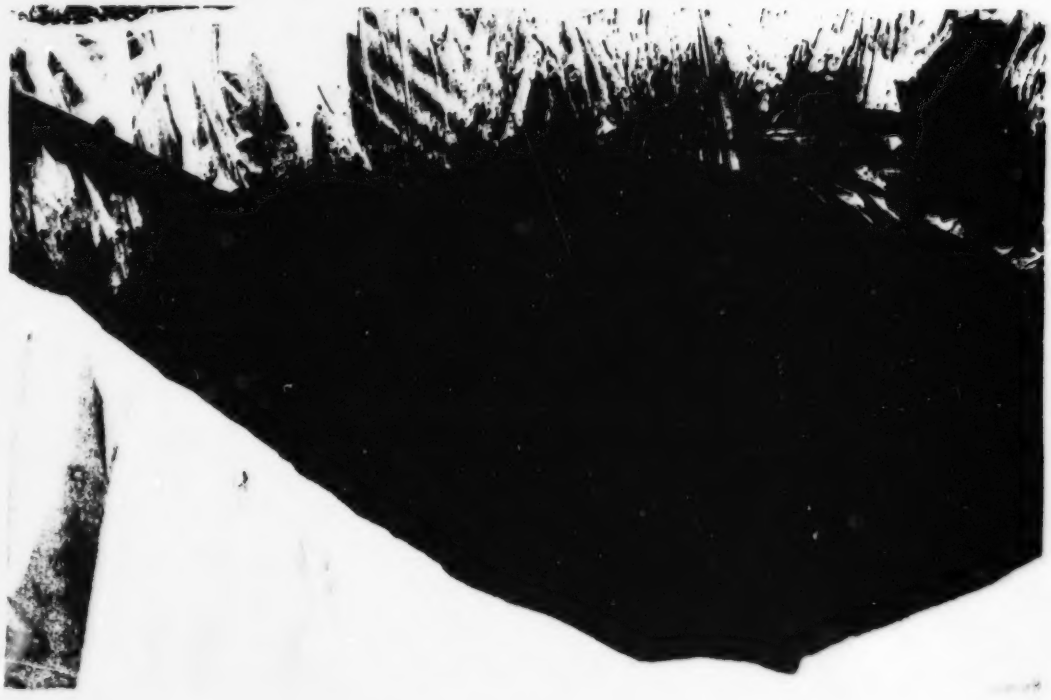
Mono Pump can be moved into hard to get at places

Mono Pump has a winch mounted on the front to assist the track carrier when transportation is difficult

This unit can be air lifted by a Bell 206 "B" helicopter

The Mono Pump can be lifted into areas that are not easily accessed

5000 centipoise type Product can be pumped up to 1000 feet in a vertical direction



The Mono Pump can pump up to 30 gpm

4" Mono Pump is reduced down to 3" for more power. It has a built in Relief Valve set at 100 psi as the hose is good for 160 psi and "O" rings are good for 120 psi

Mono Pump has its own headlights for night operation